



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,340	03/06/2007	Larry Lapanashvili	088790-000300US	6589
20350 7590 02/27/2009 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				
EXAMINER				
LAVERT, NICOLE F				
ART UNIT		PAPER NUMBER		
3762				
MAIL DATE		DELIVERY MODE		
02/27/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,340

Applicant(s)

LAPANASHVILI, LARRY

Examiner

NICOLE F. LAVERT

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date 3/6/07

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6 January 2009 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 15-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In regards to independent claim 15, an electrical stimulation with a predetermined pattern "...stored in an associated microprocessor or...a random number generator..." is claimed, in which, the said microprocessor and/or random number generator are not positively recited. Therefore, the claimed invention of an apparatus for applying said electrical stimulation signal and said parameters is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 15, 17, 20-22, 24 & 27-28** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krikorian (US 4,541,417).

Krikorian discloses a method for applying electrical stimulation to a muscle and a muscle electrical stimulating apparatus wherein said electrical stimulation comprises electrical pulses (e.g., col 2, ln 43-57) having parameters such as amplitude, pulse frequency, pulse duration, in which said parameters are varied by a predetermined pattern stored in a microprocessor or randomly varied extending over many heart beats, and a time offset, relative to a predicted end of a T-wave of an electrocardiogram, lying in a range of the R-R length before the expected end of the T-wave up to the R-R path length after the end of the T-wave [e.g., (col 3, ln 9-23), (col 5, ln 8-14), (col 6, ln 27-31) & (Fig 3)]. Note that the Examiner is interpreting the disclosed delay interval, which commences with a delay after the end of systole, i.e. the T-wave interval, as being the claimed time offset (e.g., Fig 3). Also note that the disclosed tetanizing trigger and control circuit are capable of varying the stimulation parameters as claimed, so as to provide an adjusted delay, number of contractions based on a number of heartbeats and/or the amplitude of the stimulating signal (e.g., col 3, ln 9-23). Note that the disclosed delay is capable of providing an time offset in a particular range, such as the claimed 5% of the R-R length before the expected end of the T-wave up to 45 % of the R-R path length after the end of the T-wave as instantly claimed [e.g., (col 5, ln 8-14) & (Fig 3)].

Alternatively, Krikorian discloses the claimed invention having a method and apparatus for electrically stimulating a muscle wherein said stimulation comprises a time offset relative to a predicted end of a T-wave of an electrocardiogram, lying in a range of the R-R length before the

expected end of the T-wave up to the R-R path length after the end of the T-wave, except a time offset in a range from 5% of the R-R length before the expected end of the T-wave up to 45 % of the R-R path length after the end of the T-wave [e.g., (col 5, ln 8-14) & (Fig 3)]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus as taught by Krikorian with a time offset lying in a range from 5% of the R-R length before the expected end of the T-wave up to 45 % of the R-R path length after the end of the T-wave, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [*In re Aller*, 105 USPQ 233] and/or since it has been held that a prime facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v Banner*, 778 F.2d 775, 227 USPQ.

3. **Claims 16, 18-19, 23 & 25-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Krikorian (US 4,541,417).

Krikorian discloses the claimed invention having a method and apparatus for electrically stimulating a muscle wherein the electrical stimulation has stimulation parameters adapted to be varied, such as a varied amplitude, pulse duration and/or intervals between pulses except for said amplitude variations in a range from +10V to -10V from a nominal value selected in the range from 10 to 50 V, a pulse duration in the range from 1 ms to 600 ms and an interval between pulses in the range from .1 ms to 50 ms [e.g., (col 3, ln 9-23) & (col 5, ln 1-29)]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus as taught by Krikorian with varied stimulation parameters, such as

amplitude variations in a range from +10V to -10V from a nominal value selected in the range from 10 to 50 V, a pulse duration in the range from 1 ms to 600 ms and an interval between pulses in the range from .1 ms to 50, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [*In re Aller*, 105 USPQ 233] and/or since it has been held that a prime facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v Banner*, 778 F.2d 775, 227 USPQ.

Response to Arguments

4. Applicant's arguments with respect to claims 15-28 have been considered but are moot in view of the new ground(s) of rejection based on amendments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE F. LAVERT whose telephone number is (571)270-5040. The examiner can normally be reached on M-F 7:30-5:00p.m. (alt. Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R Evanisko/
Primary Examiner, Art Unit 3762

/Nicole F. LaVert/
Examiner, Art Unit 3762
5.